

WHAT IS CLAIMED IS

1. A recycle system of aqueous paint comprising:
 - coating an article to be coated with an aqueous paint in a water-curtain-type coating booth,
 - 5 collecting an over-spray paint that does not adhere with the article by water-curtain,
 - sending the collected solution to a condensation bath through a booth circulation water bath,
 - separating it by a ultrafiltration apparatus into condensed paint and
 - 10 filtrate, the condensed paint being transferred to a paint tank, and
 - taking the condensed paint out of the paint tank if necessary to adjust, followed by coating it as an aqueous paint,
 - wherein a total amount of liquid present within the recycle system is controlled constant during spray-coating.
- 15 2. The recycling system of aqueous paint according to claim 1 wherein a total of a volume (V_w) of the booth circulation water, a volume (V_x) of the filtrate, a volume (V_y) of the collected solution in the condensation bath, and a volume (V_z) of the condensed paint in the paint tank, that is ($V_w+V_x+V_y+V_z$), is kept constant.
- 20 3. The recycling system of aqueous paint according to claim 1, wherein, in case where the system further comprises a settling tank for storing the booth circulation water and a rinse tank for storing filtrate taking out of the filtrate bath, a total of a volume (V_w) of the booth circulation water, a volume (V_x) of the filtrate, a volume (V_y) of the collected solution
- 25 in the condensation bath, a volume (V_z) of the condensed paint in the paint

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tank, a volume (V_s) of the booth circulation water in the settling tank and a volume (V_t) of the filtrate in the rinse tank, that is ($V_w+V_x+V_y+V_z+V_s+V_t$), is kept constant.

4. The recycle system of aqueous paint according to claim 1, wherein
 5 after operating the recycle system a certain period of time and stopping
 spray-coating, a necessary amount of the filtrate for cleaning the coating
 booth is sent from the filtrate bath to the spray-coating booth to clean inside
 the coating booth, and then sent to the condensation bath, followed by re-
 starting spray-coating, thus keeping the liquid content of the recycle system
 10 constant.

5. The recycle system of aqueous paint according to claim 1, wherein
 after operating the recycle system a certain period of time and stopping
 spray-coating, a necessary amount of the filtrate for cleaning the coating
 booth is sent from the filtrate bath to the spray-coating booth to clean inside
 15 the coating booth, and then spray-coating re-starts, followed by supplying
 water into the condensation bath, thus keeping the liquid content of the
 recycle system constant.

^{3bB'} 6. ~~The recycle system of aqueous paint according to anyone of~~
 claims 1 to 5, wherein the condensed paint is adjusted by adding another
 20 aqueous paint and volatile component and re-used as aqueous paint.

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